Chief Scientist Grants: A Waste of Public Money

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ASSESSMENT OF THE NEED FOR THE OFFICE OF THE CHIEF SCIENTIST AND THE CAPITAL INVESTMENT ENCOURAGEMENT LAW

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In the year 2009, the amount of 1,048 million New Israeli Shekels (NIS) was allocated by the government to allow commitments to industrial research and development. In addition, in the framework of the government's economic policy plan for 2009-2010, support for the Office of the Chief Scientist is being increased by NIS 900 million. Support for the Capital Investment Encouragement Law (LECI) has also been assessed at NIS 900 million for these years. Were a decision to be made to cancel these extra grants, the government would have no need to hike Value Added Tax (VAT) rates this year as it is doing. It should also be noted that in the 2008 budget year the Office of the Chief Scientist already received an additional NIS 315 million.

Assessing the Effectiveness of the Grants

The Capital Investment Encouragement Law (LECI)

Over the years billions of shekels have been spent via the LECI. When Knesset Member Amnon Cohen was chairman of the Knesset's State Oversight Committee he brought before the committee a report by the State Comptroller, who had conducted a survey of the effectiveness of the LECI. According to MK Cohen's June 22, 2009, article in *Haaretz-The Marker*, the State Comptroller had reported that although commitments were made to create 7,000 jobs, only 524 were created. Large businesses had promised to create more than 2,500 jobs; in reality the number of employees was decreased by almost 5,000. In addition, other surveys and investigations found that about half of the businesses never completed the investments they had committed to and/or did not meet their export or production commitments. Indeed, many economists agree that the LECI is defective and has not achieved its objectives.

An additional problem raised in MK Cohen's article is structural: because of the bureaucracy involved only part of the state-budgeted funds reach their target. Independent businessmen and owners of small businesses find it difficult to deal with all the bureaucratic twists and turns. The prolonged time it takes to start a business, the long list of criteria the entrepreneur or the business is required to meet, a burdensome registration procedure, tax policies, and the complicated legal code cause many entrepreneurs, primarily the smaller and weaker ones, to give up and forgo submitting grant requests to the government.

Instead of the government acting forcefully to reduce Israeli bureaucracy and simplify the legal and registration requirements imposed on local businesses, it continues to supply financial subsidies and budgetary increases; these ultimately

reach mainly large firms with access to attorneys and accountants who know how to manipulate the bureaucracy and navigate the intricacies of Israeli law and the local regulatory process. The government would do well to pursue an alternative reform, by which government assistance is provided not by budgetary supplements but by expansion of the tax exemption track of the LECI, which provides tax relief instead of grants. This assistance has no direct cost, and is therefore more appropriate than state handouts for a country with a large budget deficit like Israel.

Cancellation of the Budgetary Supplement to the Office of the Chief Scientist

Research undertaken by the Jerusalem Institute for Market Studies (JIMS) into the Office of the Chief Scientist raises the following points:

The Office of the Chief Scientist was created many years ago, before Venture Capital Funds flourished in Israel. Today, one may well ask whether there is still a need for the office and whether its presence contributes to the Israeli economy or is instead a waste of the public's funds. We note also that the reliance on government handouts, and on decisions to be made by particular offices, committees, cabinet ministers or high-level clerks is a gateway to inefficiency and corruption.

- **Growth in national expenditures on civilian research and development (R&D) as a percentage of Gross Domestic Product (GDP)**

National expenditure on R&D has increased over the years: the expenditure on civilian R&D as a percentage of GDP in Israel doubled over 10 years. In 1995 the national expenditure on civilian R&D stood at 2.2% of GDP, while in 2005 it stood at 4.4%. Additional increases were recorded in 2006 and 2007, when the expenditures rose to 4.5% and 4.7%, respectively.

Table 1
National Expenditure on Civilian R&D as a Percentage of GDP (1999-2007)

	1999	2000	2001	2002	2003	2004	2005	2006	2007
National expenditure on civilian R&D, as a % of GDP	3.7	4.5	4.8	4.8	4.5	4.4	4.4	4.5	4.7

Source: Central Bureau of Statistics, *The Continued Rise in National Expenditures on Civilian Research and Development in 2006*, Press Release, August 1, 2007.

In 2006, the expenditures by government offices on civilian R&D totaled NIS 4 billion. In 2007 they also totaled NIS 4 billion. Public sector expenditures on R&D rose 2.4% in 2006, following an increase of 1.9% in 2005. The expenditure on R&D

was primarily made by the Ministry of Industry, Trade and Labor – the share of this office was 64% of the total government expenditure on R&D.

- **Lenient repayment rates; only a small portion of state investment is recouped**

As long ago as 1999, economist Adam Ruskin warned in his study *Israeli Government Research and Development Subsidies to High Technology Companies* (Jerusalem: IASPS, August 1999), that terms offered by the Chief Scientist to Israeli companies are lenient in comparison with funds offered as investments by Venture Capital Funds or by investment banks, which demand that companies receiving support allocate shares in their company in return for funding. Indeed, not only does the Office of the Chief Scientist not demand this, it in fact demands low royalties with no risk. For example, if a company receiving funding by the Chief Scientist fails, it need not repay anything, even if it has available abundant cash from its other business activities; in such a case the state takes the entire loss and loses its entire investment. In the event that the company is successful it only needs to pay royalties at a rate of 2%-6% of sales annually, until it returns 100% of the grant.

Based on the regulations of the Research and Development Law, the rate of royalties to be paid from sales during the first three years a company sells products based on the research supported is 3%, and from the fourth year, 3.5%. Based on this system, the return on investments from the Office of the Chief Scientist is negative. In 2008 the Office of the Chief Scientist managed to collect royalties of NIS 406.6 million, which accounted for 30% of its expenditures in the same year, NIS 1,315 million.

In the state budget's statement of policy for the years 2009-2010, mention is made of an attempt to change the royalty system, according to which the rate and repayment schedule would be tailored to the size of the company. Even by the government's standards the step is appropriate but not sufficient, because in many cases the government will still manage to recoup only a small portion of its investment. For example, a new high-tech product is likely to sell for only a few years, after which it becomes outdated, so only a small percentage of the investment will be repaid as royalties.

- **Not every idea is worthy of financing**

Ruskin correctly claimed in his study that in contrast with the Chief Scientist and the government, the private sector is driven by a need for profits and carefully weighs the risks of a start-up alongside its profit potential; therefore the private sector funds only a small percentage of proposed business investments. The Chief Scientist in contrast approves most of the proposals it receives. In 2008 the Office of the Chief Scientist approved grants to 463 companies out of 688 requests for financing; in other words, 67% of the companies requesting funds were approved. In the years 2005-2007 the percentage of approvals was higher than 75%, as can be seen in

Table 2. In addition, Table 2 shows that from 2005 to 2008 there was an 86% increase in grants approved by the Office of the Chief Scientist (from NIS 750 million to NIS 1.4 billion).

Table 2
Number of Companies Applying vs. Number Approved (2005-2008)

Year	Number of Companies Applying	Number of Companies Approved	Approval Rate	Investment Total	Office of Chief Scientist Grants
2005	429	325	76%	NIS 1.8 billion	NIS 750 million
2006	471	371	79%	NIS 2.2 billion	NIS 917 million
2007	500	401	80%	NIS 2.2 billion	NIS 962 million
2008	688	463	67%	NIS 2.7 billion	NIS 1.4 billion

Source: Summary of the Activities of the Office of the Chief Scientist, 2006-2008, website of the Ministry of Industry, Trade and Labor.

The reason for the rate of approvals by the Chief Scientist is that the approval process is motivated primarily by budgetary considerations, while questions of potential profits and losses do not come into play as they do in the private sector. Moreover, in the business sector people know that they are responsible for every decision they make, in contrast with government officials who know that they will not lose their jobs in the event that their investment decisions do not prove worthwhile and large amounts of taxpayers' money are lost.

- **Innate preference for large businesses over small businesses**

Ruskin's research showed distortions in the way the Office of the Chief Scientist distributed its grants between start-up companies and established companies. In the annual conference of the Chief Scientist ("Research and Development 2009," November 26, 2008), the Deputy Prime Minister and Minister of Industry, Trade and Labor, and the Chief Scientist awarded prizes and citations of merit to nine outstanding research and development projects executed by Israeli companies that had received support from the Chief Scientist over some 35 years. The companies winning the prizes were: Teva Industries, Givun Imaging, ECI Telecom, Orbotech, and Comverse. These prizes bear witness to a problematic aspect of the activity of the Office of the Chief Scientist: taxpayers' money is being transferred as grants to private companies turning a profit. When recipients are publicly held companies such as Teva, these grants enrich the company's shareholders. Why has the profitable and financially sound Teva been entitled to taxpayer support for decades?

Table 3
The 10 Largest Grant Recipients from the R&D Fund (2007)

Company	R&D Grant (NIS, millions)
ECI	46.5
Teva	24.7
Elbit Systems (including El-Op)	22.3
Applied Materials	18.0
Elta Systems	16.1
Gamida Cell	11.2
Orbotech	10.0
Allot	10.0
Verint Systems	9.9
D-Pharm	9.7
Grants, total	178.4

Source: "Office of the Chief Scientist Summarizes R&D Fund's 2007 Activities," March 18, 2008, website of the Ministry of Industry, Trade and Labor.

As seen in Table 3, the sum transferred to these 10 companies receiving large grants was NIS 178.4 million, which constitutes about 20% of the NIS 917 million granted by the Chief Scientist to businesses in 2007. This even though these 10 companies represent only 2% of the 401 companies approved for funding.

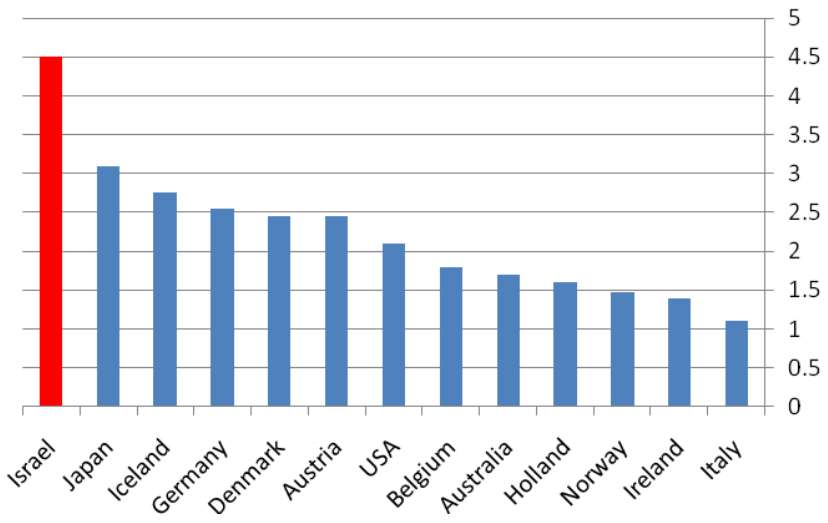
In addition, one of the main goals of the provision of grants by the Office of the Chief Scientist is the development of the country's geographic periphery and increasing employment there. However, the protocol of the Knesset's Science and Technology Committee for February 26, 2008, shows that between 2002-2007, only 10% of the entire budget of the Office of the Chief Scientist's R&D Fund was allocated to the periphery.

- **International comparison**

In 2005 Israel's civilian R&D expenditure was 4.4% of GDP. This surpasses that of OECD countries. Among OECD members, it was 3% or more in Sweden (3.7%), Finland (3.5%), and Japan (3.3%); in seven countries it was 2.1%-2.9%: Austria, Iceland, the United States, Denmark, Germany, Switzerland and Korea; and in the remaining countries it was 0.5%-1.9%.

Graph 1 shows that in 2006, Israel once again led in civilian R&D expenditure as a percentage of GDP, in comparison with OECD member countries.

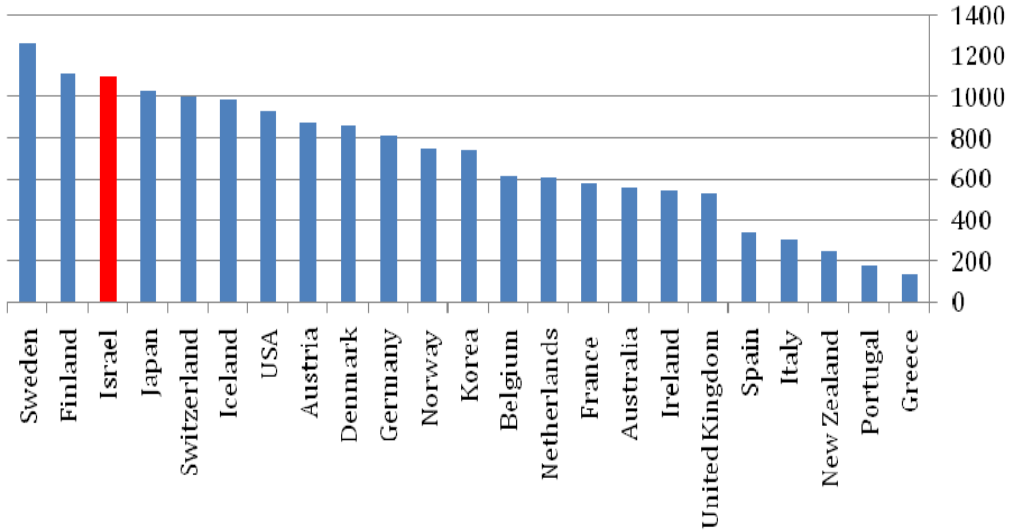
Graph 1
National R&D Expenditure as a Percent of GDP (2006)



Source: Central Bureau of Statistics, *International Comparison: National Expenditure on Research and Development (R&D),* 2006, Table 28.14.

Moreover, Graph 2 shows that in per capita terms, R&D expenditure in Israel is among the highest in the world. Israel's is higher than OECD countries', with the exception of Finland and Sweden.

Graph 2
Per Capita National Expenditure on R&D (2006, $, current prices)

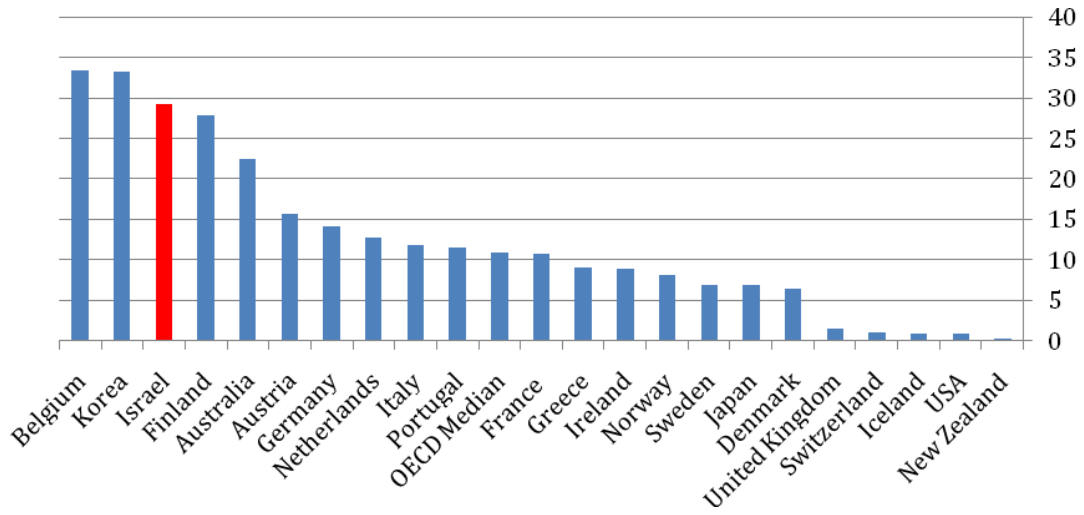


Source: Central Bureau of Statistics, *International Comparison: National Expenditure on Research and Development (R&D),* 2006, Table 28.14.

Graph 3 shows that the percentage of R&D financing used for technological advancement in Israel is also particularly high in comparison with OECD countries, excepting Belgium and Korea.

Graph 3
R&D Funding by Government Offices in Israel and OECD countries, per Objective

Investment in "Advancing Industrial Technology" as a Percentage of the General Funding of R&D in the Country, in 2007 terms



Source: Central Bureau of Statistics, *Financing of R&D by Government Offices in Israel and OECD Countries, by Objective,* 2007 Terms, Table 23.

4. Conclusions

- The budget increases planned by the Finance Ministry for both to the Chief Scientist's Office and the Capital Investment Encouragement Law can and should be canceled, because such increases and budgets have not proven themselves in the past. Were the planned budgetary outlays to be canceled there would be no need, for instance, to implement the government's plan to impose VAT on fruits and vegetables, because the money saved by canceling the budget increases, NIS 1.8 billion, would be identical to the supposed income in the coming year from the new VAT. (For more on the ramifications of imposing VAT on fruits and vegetables see the Jerusalem Institute for Market Studies' Position Paper, "Imposing a Value Added Tax on Fruits and Vegetables": http://www.jims-israel.org/pdf/VAtenglish.pdf)

- The level of R&D subsidies in Israel is much higher than that customary in OECD countries. The Office of the Chief Scientist generously distributes taxpayers' money in Israel, and does not bother with screening procedures that are standard in the business sector. Therefore, we recommend that such funds be better used; for instance, to reduce taxes. (Even by its own standards, the government needs to assess its performance and the continued provision of grants by the Office of the Chief Scientist to large and profitable companies, which come at the expense of entrepreneurs and small start-up companies.)

- If nevertheless the government decides to continue awarding grants by the Office of the Chief Scientist, royalties should be based on the size of the company and on its income, including from its other financial activities, and also the income of the owners or entrepreneurs who were awarded the grants. A different schedule of royalties for high-tech and start-up businesses should be considered, according to which most of the royalties would be paid in the initial years. If the royalty system and schedule are changed, some businesses and entrepreneurs may be less mesmerized by state grants, given that they will need to be repaid at some point; this may encourage them to turn more frequently to other sources of financing such as Venture Capital Funds and private-sector banks.

- If nevertheless the government decides to provide incentives to businesses, a better method exists without a direct cost: a tax exemption for *all* businesses. All new businesses, or expanding businesses, or R&D – can automatically merit a tax exemption for a particular number of years. The result would be: lower government expenditures, less bureaucracy, fewer distortions and less discrimination, more assistance for small businesses, bolstering borderline-weaker businesses, an incentive to open new businesses, and increased employment.